

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

AEROTEL, LTD.,

Plaintiff,

- against -

TELCO GROUP, INC., et al.,

Defendants.

1:04-cv-10292-RJH-FM

**MEMORANDUM OPINION**  
**AND ORDER**

Richard J. Holwell, District Judge:

In this patent-infringement action, plaintiff Aerotel, Ltd. alleges that a number of defendants (collectively, “Telco”) infringed U.S. Patent No. 4,706,275 (the “’275 patent”). The patent describes a system for making prepaid telephone calls. Aerotel alleges that defendants infringed the patent by using, offering to sell, and selling products and services related to prepaid telephone calling cards, and by inducing others to do so. (*See* Second Amended Compl. ¶ 27.) At the Court’s suggestion, the parties identified claim language that required construction, completed simultaneous briefing, and submitted opening and response briefs. Thereafter the Court held a hearing in which the parties presented their proposed constructions of the disputed claim terms. *See generally Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996). This Opinion sets out the Court’s construction of those terms.

## **I. BACKGROUND**

### **A. The '275 Patent**

The '275 patent describes a phone call prepayment system, whereby a user can pay in advance for a special code that can later be used to make phone calls, which are debited at that time against the earlier paid amount. The patent, which appears to have been translated into English from a foreign language, is poorly drafted. *See generally Aerotel, Ltd. v. Radiant Telecom Inc.*, 569 F. Supp. 2d 387 (S.D.N.Y. 2008). This fact accounts for many of the parties' interpretative disputes.

The parties' current disputes focus on three of the patent's claims: claim 1, claim 9, and claim 23. Claim 1 recites "[a] unique method for making telephone calls from any available telephone." (Col.6 ll.45-46.)<sup>1</sup> The claim includes nine labeled elements. They begin with "obtaining a special code by depositing a prepayment amount" (step (a)), and end with "disconnecting said call when the prepayment amount has been spent" (step (i)).

Claim 9 is a means-plus-function claim that recites "[a] telephone system for facilitating telephone calls including toll calls from any available telephone station for prepaid customers." It includes four labeled means. They begin with "means for coupling a calling party station to a special exchange," (step (a)), and end with "means for completing a call from said calling party station to a called station...." (step (d).)

Claim 23, which is independent of claim 1, recites "[a] method for making telephone calls." (*Id.* col.8 l.31.) In contrast to claim 1, claim 23 describes the operation of the prepaid calling system from the perspective of the system operator. It includes eight labeled elements. They begin with "issuing a valid special code to a calling party

---

<sup>1</sup> Unless otherwise noted, references to columns and lines are to the '275 patent.

when a prepayment amount is deposited to the credit of said calling party,” (step (a)), and end with “deducting from the initial prepayment amount the running cost of the call” (step (h)).

The ’275 patent’s specification discloses two embodiments of the invention. In the first embodiment, the customer “acquires a special code, a credit amount[,] and the telephone number of the special central offices by either a cash or credit card payment.” (Col.3 ll.3-5.) He then “uses the nearest available telephone” to call a “special central office.” (Col.3 ll.20-21.) Once connected to the special central office, the user dials an identifying code number and the phone number he wishes to reach. A computer verifies the inputted information and connects the call if the information is successfully verified.

After the call is connected, a “time and distance computing circuit . . . is put into service to provide information for timing the call against the available credit.” (Col.4 ll.3-6.) Information from the circuit is sent to a comparator, and the call is automatically terminated “[w]hen the credit equals the used time rate.” (Col.4 ll.9-10.) The specification also describes a process by which, after terminating a call, the user can place another call without having to hang up and redial the central office. (Col.4 ll.28-43.) Figures 1 and 3, appended to this Opinion, illustrate the operation of this embodiment.

The second embodiment describes the use of the system from a “dedicated public telephone.” (*See* col.4 l.44 – col.5 l.28.) In this embodiment, the caller does not have to dial the “special central offices” before making a call. Instead, as soon as he picks up a receiver and “goes off hook” (col.4 l.47) at a dedicated public telephone, he hears a dial tone and dials an identifying code. Thereafter, the system functions similarly to the

system described in the first embodiment. Figures 2 and 4 illustrate the operation of this embodiment. (See Appendix A.)

**B. Prosecution Amendments**

The '275 patent was filed on November 13, 1985. In an Office Action issued October 2, 1986, the examiner rejected all of the claims in the patent on the grounds that they were indefinite and failed to particularly point out and distinctly claim the subject matter of the invention. Specifically, the examiner objected that (1) “[l]ine 10 of claim 1 is grammatically incorrect;” (2) the “running cost of the call” referred to in claim 1, line 11 could not be calculated before the call was connected; (3) it was unclear whether the “subscriber codes” in line 6 of claim 10 included non-registered numbers; and (4) he did not understand what was meant by “the *code* in the memory” referred to at claim 10, line 9.

The examiner additionally rejected claims 1-9, 11-16, and 18-23 as being unpatentable in view of two U.S. patents: U.S. Patent No. 3,676,597 (“Peterson”), which discloses a “coin telephone non-coin service,” and U.S. Patent No. 4,595,983 (“Gehalo”), which discloses a “central office powered credit only telephone paystation.” In essence, the examiner found that when read together, these two patents contained all of the purportedly novel features described in the patent. The examiner noted:

Although Peterson mentions postpay telephone systems in his prior art discussion, his invention does not specifically mention prepayment and credit monitoring. It would therefore be obvious to supply the Peterson reference with the credit monitoring and prepayment features disclosed in Gehalo et al since Gehalo et al is also a credit telephone which has the feature of making calls without coins or credit cards. (Office Action, at 3 (Nov. 13, 1985), Burling Decl. Ex. 13.)

In response to the examiner’s rejection, Aerotel filed amendments to its patent application on February 2, 1987, which made several changes to claim 1. Most

significantly, Aerotel replaced references to “credit” throughout the claim with references to the “prepayment amount.” (Amendment, at 2 (Nov. 13, 1985) (“Nov. 1985 Amdt.”), Burling Decl. Ex. 6.) In addition, Aerotel amended claim 1 to include lettered steps; used the phrase “making a prepayment” in place of “depositing a prepayment amount” in step (a); and added step (h). (*See* Amendment, at 1-2 (Nov. 13, 1985) (“Nov. 1985 Amdt.”), Burling Decl. Ex. 6.) Finally, Aerotel responded to the examiner’s objection that the running cost of the call could not be known before the call began by calling for the “*minimum* cost of the inputted call” to be determined before connecting the call.

### **C. Reexaminations**

The ’275 patent issued on November 10, 1987. Since then, the Patent and Trademark Office has twice reexamined the patent’s validity. In an Office Action issued December 20, 2000, the PTO announced that an examiner intended to reject claims 1 through 23 of the patent as being obvious or anticipated by various patents, including U.S. Patent No. 4,162,377 (“Mearns”). (*See* Office Action in Reexamination (Dec. 12, 2000), Morgan Decl. Ex. 5.) However, the PTO confirmed the validity of the patent after Aerotel submitted a twenty-seven page response. (Reply to Office Action in Reexamination (Mar. 20, 2002) (“Mar. 2002 Reply”), Morgan Decl. Ex. 3); Notice of Intent to Issue Reexamination Certificate (Dec. 16, 2002), Morgan Decl. Ex. 8; *see also* Reexamination Certificate, U.S. Patent No. 4,706,275, at cols. 1-2 (Apr. 8, 2003).)

On April 13, 2005, the PTO issued a second Office Action, in which the examiner proposed to hold claims 1-12, 15, 16, and 18-23 unpatentable or obvious. (Office Action in Ex Parte Reexamination (Apr. 13, 2005), Morgan Decl. Ex. 10.) Aerotel again filed a lengthy response, and the PTO again confirmed the patent’s validity. (Reply to Office

Action in Reexamination (June 9, 2005), Morgan Decl. Ex. 11; Notice of Intent to Issue Ex Parte Reexamination Certificate (Sept. 13, 2005), Morgan Decl. Ex. 13; *see also* Reexamination Certificate, U.S. Patent No. 4,706,275, at cols. 1-2 (June 27, 2006).)

#### **D. Washington Action**

In 2007, Aerotel brought a similar action against T-Mobile USA, Inc. before Judge Robart in the Western District of Washington. Case No. C07-1957JLR (“Washington Court”). That action alleged infringement of only Claim 23 of the ‘275 patent, but raised some of the same claim construction issues as are raised by the parties here. The contentions of the parties overlap in part, but are by no means identical: Telco, the defendant herein, seeks construction of different terms (e.g. “any available telephone”). And even when seeking construction of the same terms, the proposed constructions often differ. *E.g. compare* Washington Court at 16 (“T—Mobile seeks ... a unique number, other than an identifier of a telephone subscriber or a telephone number, that the calling party inputs to the special exchange to make a prepaid call”) *with* Joint Claim Chart, at 2 (Telco suggesting that a special code is “a unique number received by a user from the prepaid service provider in return for a prepayment amount.” Where appropriate, reference appears below to that action’s arguments and proposed constructions. After proceedings were delayed in this action, the Court deferred ruling pending the Washington Court’s issuance of a Markman order regarding Claim 23. On December 23, 2009, that Court issued its claim construction order. Where appropriate, reference appears below to the Washington Court’s claim construction order.

## II. CLAIM CONSTRUCTION

### A. Legal Standard

The standards governing the construction of patent claims are familiar and well established. *See generally Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (summarizing and restating doctrine). Because patents are addressed to practitioners in the field of the patented invention, a court should usually construe claim language consistent with its “ordinary and customary meaning” to a person of ordinary skill in the relevant art on the effective filing date of the patent application. *Id.* at 1312–13. “Such a person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field.” *Id.* at 1313 (quoting *Multiform Dessicants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998)).

To determine the “ordinary and customary meaning” of a claim term, a court should first consult the intrinsic evidence—the claims, the specification, and the prosecution history. *See, e.g., Primos, Inc. v. Hunter’s Specialties, Inc.* 451 F.3d 841, 847–48 (Fed. Cir. 2006); *Kinik Co. v. Int’l Trade Comm’n*, 362 F.3d 1359, 1365 (Fed. Cir. 2004). Prior art cited to the examiner during prosecution is considered part of the prosecution history. *See Phillips*, 415 F.3d at 1317.

“A fundamental rule of claim construction is that terms . . . are construed with the meaning with which they are presented in the patent document. Thus claims must be construed so as to be consistent with the specification . . . .” *Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 347 F.3d 1367, 1370 (Fed. Cir. 2003) (citations omitted). Therefore, the patent specification has been called the most important guide to claim construction.

*See, e.g., Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (“[The specification] is always highly relevant to the claim construction analysis. Usually, it is dispositive.”); *Phillips*, 415 F.3d at 1315–16 (“The best source for understanding a technical term is the specification from which it arose, informed, as needed, by the prosecution history.” (quoting *Multiform Desiccants*, 133 F.3d at 1478)).

The specification may show that a patentee has provided its own definitions for claim terms or has narrowed the scope of the claims through disclaimer. *See Phillips*, 415 F.3d at 1316. In such cases, the claim is construed according to the patentee’s expressed intent even if the resulting construction departs from the ordinary meaning of the claim language. *See, e.g., id.; Honeywell Int’l, Inc. v. Universal Avionics Sys. Corp.*, 493 F.3d 1358, 1361 (Fed. Cir. 2007) (“When a patentee defines a claim term, the patentee’s definition governs, even if it is contrary to the conventional meaning of the term.”). A patentee may redefine a term either explicitly or implicitly. *See, e.g., Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1367 (Fed. Cir. 2003) (“The applicant may also act as his own lexicographer and use the specification to implicitly or explicitly supply new meanings for terms”); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001) (“[T]he specification may define claim terms ‘by implication’ such that the meaning may be ‘found in or ascertained by a reading of the patent documents.’”).

Though claims should be interpreted in light of the specification, it generally is inappropriate to import limitations from the specification into the claims. *See, e.g., N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1348 (Fed. Cir. 2005); *Prima Tek II, L.L.C. v. Polypap, S.A.R.L.*, 412 F.3d 1284, 1289 (Fed. Cir. 2005); *see also*



*SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001) (describing the reading of a limitation from the written description into the claims as “one of the cardinal sins of patent law”). For example, the scope of a claim is usually not limited to the particular embodiment or embodiments described in the specification. *See, e.g., Resonate Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360, 1364–65 (Fed. Cir. 2003) (“[A] particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.”) In order to determine whether the limitations of an embodiment should be applied to a claim, a court must determine whether a person of skill in the art would consider the embodiments to be merely exemplary, or whether they are intended to define the scope of the claim. *See Phillips*, 415 F.3d at 1323; *Pfizer, Inc. v. Ranbaxy Labs. Ltd.*, 457 F.3d 1284, 1290 (Fed. Cir. 2006) (“[I]mport[ing] limitations from the specification into the claims . . . should be avoided unless the patentee clearly ‘intends for the claims and the embodiments in the specification to be strictly coextensive.’” (quoting *Phillips*, 415 F.3d at 1323)).

The prosecution history, also part of the intrinsic evidence, may “inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Phillips*, 415 F.3d at 1317. However, the prosecution history “often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.*

“Extrinsic evidence is that evidence which is external to the patent and file history, such as expert testimony, inventor testimony, dictionaries, and technical treatises

and articles.” *Vitronics*, 90 F.3d at 1584. While a district court may consult extrinsic evidence as part of the claim construction analysis, such evidence is considered less reliable than the intrinsic evidence. *See, e.g., Phillips*, 415 F.3d at 1317–19 (“[T]he court should keep in mind the flaws inherent in each type of [extrinsic] evidence and assess that evidence accordingly.”).

These guidelines are not exhaustive. As the Federal Circuit has noted, “there is no magic formula or catechism for conducting claim construction,” and a court is not “barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence.” *Phillips*, 415 F.3d at 1324. “[W]hat matters is for the court to attach the appropriate weight . . . to those sources in light of the statutes and policies that inform patent law.” *Id.*

## **B. Disputes Affecting Claims 1 and 23**

Two of the parties’ disputes relate to both claim 1 and claim 23. The Court begins by addressing these disputes.

### **1. Order of Steps**

The parties first dispute whether the steps in claims 1 and 23 must be performed in the exact order recited in the claims. Under Federal Circuit precedent, the steps in a method claim need not be performed in a particular order unless the claim implicitly or explicitly requires this result. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003); *Interactive Gift Exp., Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1342–43 (Fed. Cir. 2001). Two inquiries are relevant to the analysis. First, a court must “look to the claim language to determine if, as a matter of logic or grammar, [the steps] must be performed in the order written.” *Altiris*, 318 F.3d at 1369. If the grammar and logic of

the claims does not require a particular order, a court must “look to the rest of the specification to determine whether it ‘directly or implicitly requires such a narrow construction.’” *Id.* at 1370 (quoting *Interactive Gift*, 256 F.3d at 1343). Conversely, if the “sequential nature of the claim steps is apparent from the plain meaning of the claim language,” a sequential construction is required so long as “nothing in the written description[, the specification,] suggests otherwise.” *Mantech Envtl. Corp. v. Hudson Envtl. Servs., Inc.*, 152 F.3d 1368, 1375-76 (Fed. Cir. 1998).

Here, Aerotel maintains that “[n]othing requires that all the steps of the paragraphs of Claims 1 and 23 need to be performed in the order they are recited” (Pl.’s Resp. Br. 22), while Telco contends that “Aerotel’s claim amendments as well as grammar and logic dictate that the claimed methods must follow the order of the steps as set forth in claims 1 and 23 . . . .” (Def.’s Opp. Br. 8.) In view of Telco’s position, the first question to resolve is whether anything in the claims’ “grammar and logic” requires that the steps be performed in the order written.

Both logic and grammar support a sequential construction of the steps in claim 1. Logically, most but not all of the steps in claim 1 must be performed in the order in which they are recited. The significant degree to which the claims are logically sequential supports a construction requiring that all of the steps must be performed in order. Specifically, the Court finds as follows with respect to claim 1:<sup>2</sup>

---

<sup>2</sup> The text of claim 1 is as follows:

1. A unique method for making telephone calls from any available telephone, said method comprising the steps of:
  - (a) obtaining a special code by depositing a prepayment amount;
  - (b) storing the prepayment amount in a memory in a special exchange for use in verifying calling party calls;
  - (c) dialing said special exchange when a telephone call connection is desired;

- Step (a) (“obtaining a special code by depositing a prepayment amount”) must be performed before steps (d) (“inputting such special code for verification”), (f) (“verifying the special code . . . .”), (h) (“monitoring the prepayment amount . . .”), and (i) (“disconnecting . . . when the prepayment amount has been spent”). Logically, steps (d) and (f) assume that a special code has been issued, while steps (h) and (i) assume a particular prepayment amount.
- Step (b) must be performed before steps (f), (h), and (i). In step (b), a prepayment amount is stored in the special exchange’s computer system. In step (f), it is compared to the minimum cost of the inputted call (less deductions for previous calls). In step (h), a variable calculated by subtracting “deductions for the running cost of the call” from the prepayment amount is monitored. In step (i), the call is disconnected if the prepayment amount is spent. Thus, steps (f), (h), and (i) assume step (b) has been performed.
- Step (c) must be performed before steps (d) through (i). Steps (d) through (i) assume that a call to the special exchange has been made.
- Step (e) must be performed before step (g). Step (g) connects the calling party to the number entered by the user in step (e).
- Step (f) must be performed before steps (g) through (i). Each of steps (g), (h), and (i) assume that the verification performed in step (f) was successful.
- Step (g) must be performed before steps (h) and (i). Steps (h) and (i) assume that the connection required by step (g) has occurred.<sup>3</sup>

Thus, most of the steps appear in an order that they are also logically required to be performed in. This fact supports a sequential construction of the steps in the claim.

- 
- (d) inputting such special code for verification;
  - (e) inputting the number of the called party;
  - (f) verifying the special code and comparing the prepayment amount less any deduction for previous calls in the memory and the minimum cost of the inputted call;
  - (g) connecting called party to the calling party in response to the verification;
  - (h) monitoring the prepayment amount less deductions for the running cost of the call; and
  - (i) disconnecting said call when the prepayment amount has been spent.

<sup>3</sup> As explained below, the “verification” in step (g) is most naturally read as referring to both processes described in step (f). *See* § II.C.4, *infra*.

Moreover, the claim language also supports such a construction: claim 1 provides for “[a] unique method for making telephone calls from any available telephone, said method comprising *the steps of...*,” and then lists the steps in lettered order. Generally speaking, steps are taken in order. In light of this grammatical indication and the significant degree to which the steps are logically required to follow in their given alphabetical orders, the Court concludes that the steps of claim 1 must be performed sequentially.

Turning to claim 23,<sup>4</sup> the Court finds as follows:

- Step (a) must be performed before steps (b), (e), (g), and (h). In step (a), the user deposits a “prepayment amount” with the system operator and receives a “valid special code.” In step (b), the computer system at the special exchange records the prepayment amount. In step (e), a variable labeled “current initial prepayment amount,” calculated in part based on the “prepayment amount” of step (a), is compared to “the minimum cost of a call to the inputted number.” Steps (g) and (h) perform calculations based on this variable.
- Step (b) must be performed in quick succession with (a) and before steps (e), (g), and (h). The “prepayment amount” must be stored when it is known – at the time it is deposited during step (a). Further, the “current initial prepayment amount” of step (e) is calculated based on the value stored of the “prepayment amount” stored in step (b), and used in steps (g) and (h).

---

<sup>4</sup> The text of claim 23 is as follows:

23. A method for making telephone calls comprising:
- (a) issuing a valid special code to a calling party when a prepayment amount is deposited to the credit of said calling party;
  - (b) storing the prepayment amount in a memory in a special exchange;
  - (c) dialing said special exchange when the calling party wishes to make a telephone call to a called party;
  - (d) connecting the calling party to the called party only if the special code inputted by the calling party is a valid special code, and in addition, only if the current initial prepayment amount in the memory exceeds the minimum cost of a call to the inputted number;
  - (f) monitoring the running cost of the call in accordance with its duration;
  - (g) disconnecting the calling party from the called party when the calling party hangs up, or when the running cost of the call exceeds the current initial prepayment amount, whichever occurs first; and
  - (h) deducting from the initial prepayment amount the running cost of the call.

- Step (c) must be performed before steps (d), (e), (f), and (g). Each of the latter steps assumes that a call has been placed to the special exchange.
- Step (d) must be performed before step (e). In step (d), a user inputs a “special code,” which is validated in (e).
- Step (e) must be performed before steps (f) through (g). Each of the latter steps assumes the existence of a phone connection.
- Steps (f) and (g) describe processes that occur simultaneously or in quick succession. Step (f) provides that the system will “monitor[] the running cost of the call in accordance with its duration,” while (g) provides that the call will be disconnected if “the running cost of the call exceeds the current initial prepayment amount.”
- For reasons discussed below, step (g) must be performed before step (h).

Combining these requirements so as to make them consistent with each other, the only logically consistent possibility is precise sequential performance of the steps.

Nothing in the specifications dictate a different result. Moreover, the Washington Court reached the same conclusion. Washington Court at 19 (concluding that the steps must be sequential and that “[t]o read the steps in any other order would be illogical.”). The Court finds that the steps in claim 23 must be performed sequentially.

## **2. Application to Calls Beyond the First Call Made**

Citing *BMC Resources, Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1379 (Fed. Cir. 2007), for the proposition that “[i]t is a fundamental principle of Patent Law that for a claimed method to be practiced, all the steps of the claim must be performed,” Telco contends that claims 1 and 23 apply only to the first call made. (Def.’s Opening Br. 25-26.) In claim 1, for example, a prepayment amount is only stored once. Thus, Telco contends, it is impossible for subsequent calls to practice all the steps of the claim. In the Court’s view, this argument goes to whether the defendants’ products and service

infringe the '275 patent. *See BMC Resources*, 498 F.3d at 1380 (deciding issue of infringement, not claim construction). Accordingly, the Court will not address it at the claim-construction stage.

With these general issues resolved, the Court turns to the disputed claims.

### C. Claim 1

#### 1. “A unique method for making telephone calls from *any available telephone*”

The phrase “making telephone calls from any available telephone” appears in the preamble to claim 1. The parties raise two issues concerning the phrase: (1) whether it requires that a “standard telephone” be used to call the special exchange (an issue raised by Telco); and (2) whether it says anything about the location of the telephone (an issue raised by Aerotel). Aerotel proposes that “the telephone is not location-specific (*i.e.*, a prepaid caller is not limited to a dedicated telephone fixed at a particular location) and that the telephone can communicate signals with the special exchange.” (Joint Claim Chart, at 1.) Telco contends that “making telephone calls from any available telephone” means “[m]aking telephone calls from any standard telephone without requiring a special interface to communicate with the special exchange.” (*Id.*)

“In general, a preamble is construed as a limitation [only] if it recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim. A preamble is not limiting, however, where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.” *Symantec Corp. v. Computer Assocs. Int’l, Inc.*, 522 F.3d 1279, 1288 (Fed. Cir. 2008) (citations and internal quotation marks omitted). Because the lettered paragraphs of claim 1 do not expressly indicate that the prepaid calling center or special exchange is called from a phone, and since that aspect of the claim is essential to its

meaning, the Court finds that “making telephone calls from any available telephone” states a limitation on claim 1, namely that the call be made from a telephone.

The scope of that limitation is determined by generally applicable claim construction principles. *Bell Commc’ns Research, Inc. v. Vitalink Commc’ns Corp.*, 55 F.3d 615, 621 (Fed. Cir. 1995). Applying those principles, the Court finds that “making telephone calls from any available telephone” generally means what it says. While the ability to access the prepaid system from any available telephone allegedly distinguishes the ’275 patent from the prior art, the patent is conspicuously silent on the characteristics of the telephone used to call the special exchange. The only features that are clearly required by the specification and claims are that the telephone (1) be capable of dialing the special exchange (*see* step (c); *see, e.g.*, col.3 ll.20-21 (using “nearest available telephone,” calling party “dials a special central office”)); (2) be capable of transmitting a “special code” to the special exchange (*see* step (d); *see, e.g.*, col.3 ll.26-29 (“When the calling party hears the special dial tone[,] indicating that the computer at the exchange is ready for him[,] he dials the identifying code and the called number he wants as indicated at block 17.”); and (3) be capable of transmitting a phone number to the exchange (*see id.*). The preferred embodiment described at col.6 ll.22-26 further requires that the phone be capable of transmitting special codes to the special exchange while a call is in progress (e.g., “999” to signal the end of a call). But claims 1 and 23 contain no corresponding limitation, thus the claims are not limited by the preferred embodiment disclosed in the specification.

Telco’s suggestion that a “standard telephone” must be used to call the special exchange cannot be squared with the language of the claim or the specification. As for



the claim's language, the word "any" speaks for itself. Turning to the specification, one of the two embodiments described in the patent uses "dedicated public telephone[s]" to access the special exchange. The specification further contemplates that the exchange can be reached from "hotel room telephones" (col.1 l.36), "public payphones," (col.1 l.40), and phones that belong to salesmen's customers (col.1 l.50.) Undoubtedly, some of these are not "standard" telephones, either because they connect to the regular telephone system through a special interface (as with a phone connected to an office PBX), or because they use nonstandard hardware (as with a payphone). Thus, the Court rejects Telco's proposed limitation that calls must be made from a standard telephone without requiring a special interface to communicate with the special exchange.

The fact that Aerotel distinguished the invention of the '275 patent from earlier systems which required a special interface does not alter this conclusion. Telco maintains that "if you need a special interface to access the exchange to make a phone call, then that's not within the scope of the invention" because prior art systems required a special interface to make a prepaid call. (See Def.'s Opening Br. 8-10; Tr. of Oral Arg. 32-34.) But this mistakes a distinguishing feature of the invention disclosed in the '275 patent (accessibility from any phone) for a limitation (accessibility from standard phones). Consider a less technologically exotic example. Unlike motorcycles designed for highway use, the Ducati Multistrada excels on every kind of road with amazing sports performance. (*See generally* Jim McCraw, *All Roads Become a Holiday*, N.Y. Times, Nov. 9, 2003, at L12.) We would not say, however, that because the Multistrada *can* be used on roads other than highways, it *must* be; the Multistrada's genius lies in its versatility. So it is with the system disclosed by the '275 invention: "if a party wants to

make a call, be it a local call or a long distance national or international call, he should be able to accomplish the call from the nearest available telephone,” (col.1 ll.57-60), whether or not it uses a special interface.<sup>5</sup>

Aerotel’s contention that “a prepaid caller is not limited to a dedicated telephone fixed at a particular location” finds more support in the patent’s specification. In light of the disclosed embodiments, claim 1 clearly is not limited to a “dedicated” phone system. And the specification nowhere describes the calling phone as being “fixed” or “unfixed.” The language proposed by Aerotel, however, is largely redundant in view of the limitations already identified by the Court. Thus while the Court agrees with Aerotel’s understanding of what “any available telephone” denotes, it declines to adopt Aerotel’s proposed language.

“Making telephone calls from any available telephone” means that the calling telephone must be capable of (1) dialing the special exchange; (2) transmitting a special code to the exchange; and (3) transmitting a phone number to be called to the exchange. Beyond those requirements, the phrase does not limit the characteristics of the initiating telephone.

---

<sup>5</sup> In a variation on this argument, Telco contends that a no-special-interface limitation must be read into claim 1 to save the claim’s validity, since otherwise the claim would be anticipated by a British patent. (Def.’s Opening Br. 9.) Without expressing any view as to the claim’s validity, the Court notes that the interpretative issue is not nearly so close as to require the application of the doctrine that a claim should be construed, if possible, so as sustain its validity. *Cf. MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1332 (Fed. Cir. 2007) (“[W]e have limited the maxim [that claims are to be construed to preserve validity] to cases in which the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous.”); *Phillips*, 415 F.3d at 1327 (same).

2. “[O]btaining a *special code* by depositing a *prepayment amount*” and “storing the *prepayment amount* in a memory . . .”

Step (a) refers to “obtaining a special code by depositing a prepayment amount,” and step (b) refers to storing that amount in a special exchange for later use in verifying calls. The parties dispute what “special code” and “prepayment amount” mean.

*a. Special code*

The dispute over “special code” focuses on the characteristics of the code and how it is obtained. Aerotel claims that the term generically refers to “a code used by the prepaid calling system,” while Telco contends it refers to a “[1] unique number received [2] by a user from the prepaid telephone service provider [3] in return for a prepayment amount.” (Joint Claim Chart, at 2 (emphasis added).)

Neither construction is quite right. On one hand, Aerotel’s proposed construction is too broad. As described in the specification and used throughout claim 1, “special code” is not *any* code used by the prepaid calling system, but a code identifying a particular account. (See claim 1, ¶¶ (d), (f); see, e.g., col.3 ll.3-6 (“The customer, such as a regular telephone user or a traveler[,], acquires a special code, a credit amount and the telephone number of the special central offices by either a cash or credit card payment.”); col.3 ll.26-30 (“When the calling party hears the special dial tone[,], indicating that the computer at the special exchange is ready for him[,], he dials the identifying code and the called [sic] number he wants as indicated at block 17.”).) A person skilled in the art would know that a telephony system uses a number of other codes, including country codes, area codes, billing codes, and so forth.

On the other hand, only some of the limitations proposed by Telco find support in the claim and specification. First, Telco’s “unique number” limitation is too broad

because it fails to distinguish codes unique within the system from those unique in other regards. Although the system envisions that each accounts' code is unique from the others', nothing in the specification precludes the system operator from using, for example, a user's home phone number or credit card number as a special code. Indeed, to the extent the specification speaks to this possibility, it suggests it is within the scope of the disclosed invention. (*See* col.3 ll.6-9 ("The code, the credit amount and telephone numbers may be acquired, for example[,] through the regular credit card companies and charged to the acquirer's credit card.").) The Court therefore rejects Telco's contention that the special code cannot be tied to an existing identifier, such as a user's home phone number. Rather, the Court agrees with the Washington Court that the special code must be sufficiently unique to connect only one credit account to only one code. *See* Washington Court, 16-18.

The Court also finds that the claim and specification do not support the limitation that the special code is obtained "by a user from a prepaid service provider." Clearly, such a limitation is not required by the language of step (a), which is written in the passive voice and speaks only to "obtaining a special code by depositing a prepayment amount[.]" The specification is similarly ambiguous, as are the statements that Telco cites to show a narrowing of the claim during reexamination. (*See, e.g.*, col.3 ll.3-5 ("*The customer*, such as a regular telephone user or a traveler[,] acquires a special code . . . ." (emphasis added)); col.4 ll.45-46 ("Here again *the customer* calling party must have a prepaid code number . . . ." (emphasis added)); Reply to Office Action in Reexamination 3 (Feb. 20, 2001) ("In the prepayment transaction, *the customer* pays a predetermined amount and receives a ticket . . . ."), Maldonado Decl. Ex. 3.) The Court

therefore finds that the claim does not require that any particular person deposit the prepaid amount.<sup>6</sup>

Telco's suggestion that the code must be received in return for the deposit of a prepayment, however, is well-supported. In a single grammatical unit, step (a) refers to "obtaining a special code *by depositing* a prepayment amount." Similarly, the specification teaches that "[t]he customer . . . acquires a special code, a credit amount and the telephone number of the special central offices *by* either a cash or credit payment." (Col.3 ll.3-6.) In both the claim and the specification, the preposition "by" signals how the code is acquired—namely, in return for receipt of a prepayment amount. The Court therefore finds that the code is received in return for a prepayment amount.

"Special code" means a code that is received in return for the deposit of a prepayment amount that is linked to a particular account.

*b. Prepayment amount*

Turning to "prepayment amount" (as it is used in steps (a) and (b)), the parties dispute (1) whether the amount stored at the special exchange must equal the amount paid, and (2) whether the amount must be paid *by the user*. Aerotel contends claim 1 contains no such limitations, while Telco argues that the claim contains both. (*See* Joint Claim Chart, at 2-3; Def.'s Opening Br. 14-15).

The specification speaks directly to the parties' first dispute. Specifically, the first paragraph of the specification's general description outlines the process whereby a user obtains a special code and the special exchange stores an account's balance:

---

<sup>6</sup> The Court further notes, for the sake of clarity, that claim 1 contains no limitation requiring that the prepayment amount be paid *directly* to the prepaid system operator. The language of the claim contains no such limitation, which would be inconsistent with the process of acquiring a special code described at col.3 ll.6-12.

The customer, such as a regular telephone user or a traveler[,], acquires a special code, a credit amount and the telephone number of the special central offices by either a cash or credit card payment. The code, the credit amount and telephone numbers may be acquired, for example[,], through the regular credit card companies and charged to the acquirer's account. Alternatively, the credit amount, the telephone numbers and identifying code can be purchased at sales points such as in airports, hotels, rent-a-car stations and the like. *The amount paid is credited to the acquirer for use against future telephone calls.* The credited amount is stored in a memory at the special central office along with the special code. (Col.1 ll.1-6; 12-16 (emphasis added).)

Consistent with the principle that the specification “is the single best guide to the meaning of a disputed term,” *Vitronics*, 90 F.3d at 1582, the Court finds that “prepayment amount” of steps (a) and (b) is the precise amount deposited by a user to obtain a special code, not any amount credited to the user by the prepaid system operator. The express language of steps (a) and (b) further supports this conclusion. Step (a) describes “obtaining a special code by depositing a prepayment amount.” Step (b) then refers back to step (a), and calls for “storing the prepayment amount”—i.e., the prepayment amount of step (a)—“in a memory in a special exchange for use in verifying calling party calls.”

While the amount paid must be the amount credited, the specification does not teach that the prepayment amount must be paid by the user who ends up making a prepaid call. Step (a) nowhere says who “obtain[s]” a special code. And the two examples of how a special code is obtained are similarly silent on the relationship between the person who acquires the code and the person who makes a call. The Court therefore does not read steps (a) and (b) to contain a limitation that the user of the prepaid telephone system must be the person who deposited the prepayment amount.

“Prepayment amount,” as used in steps (a) and (b), is the exact amount of money deposited to obtain a special code. It may be deposited by anyone.

3. “[S]toring the prepayment amount in a memory in a *special exchange* for use in verifying calling party calls” and “*dialing said special exchange*”

Steps (b) and (c) refer to a “special exchange,” the telephony system that processes and monitors prepaid calls. The parties raise four issues about the special exchange and what it means to “dial” it: (a) where the exchange is located in the telephone network; (b) whether the exchange must have a phone number and be accessible from any telephone; (c) the features of the special exchange; and (d) how one goes about “dialing” the special exchange.

*a. Location*

The parties first dispute concerns where the special exchange is located in the telephone network. According to Aerotel, “[t]he special exchange in the patent is, *from the point of view of the calling telephone*, behind the exchange or equipment that initially receives the call.” (Joint Claim Chart, at 4 (emphasis added).) Telco, by contrast, contends that the special exchange is located “behind the local exchange that initially receives the call.” (*Id.*) Telco has the better of the argument.

Claim 1 is silent about where the special exchange is located, and no party has suggested that the term has an ordinary and customary meaning. The term therefore must be interpreted consistently with the meaning the specification ascribes to it. Two sections of that specification are most relevant. First, Figure 1 and the text describing it show the user “dial[ing] for special [services],” an apparent reference to placing a call through the regular telephone system, before receiving a “Computer dial tone” from the special exchange. (*See* col. 3 ll.20-22 (“[The user] uses the nearest available telephone, removes the handset[,] and dials a special central office, as indicated at blocks **13** and **14**.”))

Second, figure 4 expressly shows a system where dedicated phones “connect[] through

switches such as switch **102**, *and a regular exchange*, to the special exchange.” (Col. 5 ll.64-66 (emphasis added).) In view of these references and the patent’s more general requirement that the special exchange be reachable from “any available telephone,” *see supra* § II.C.1, the Court believes that a person of skill in the art would understand that the special exchange must be located behind a regular telephone exchange for it to have its intended functionality.

Moreover, statements made by Aerotel during reexamination of the ’275 patent reinforce this conclusion. While Aerotel’s statements concerning the location of the special exchange were not entirely consistent, Aerotel several times expressly described the special exchange as being located behind a local exchange. (*Compare* Mar. 2002 Reply, at 7 (“The special exchange . . . is most likely served by one of the other local exchanges”) *with id.* (“Even where the same local exchange that serves the calling telephones serves the special exchange, the special exchange is reached by dialing through the local exchange.”); *id.* at 7-8 (“the special exchange of the invention is located ‘behind the local exchange’”); *id.* at 8 (“if the special exchange were not located ‘behind a local exchange,’ it could not be dialed from the nearest available telephone, but only from telephones supervised by the special exchange”).)

The special exchange is located behind a local exchange.

*b. Phone Number and Accessibility from “Any Available Telephone”*

The parties next dispute whether the special exchange must have a telephone number, and whether it must be accessible from any available telephone. Relying principally on certain statements made by Aerotel during the first reexamination of the ’275 patent, Telco argues that “[t]he special exchange has its own *conventional telephone number* that *can be dialed* from any available telephone to make a prepaid call.” (Joint



Claim Chart, at 4). Aerotel denies that the claim contains either limitation. (*See* Pl.’s Reply Br. 13-17.)

“Where an applicant argues that a claim possesses a feature that the prior art does not possess in order to overcome a prior art rejection, the argument may serve to narrow the scope of otherwise broad claim language.” *Seachange Int’l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1372–373 (Fed. Cir. 2005). In determining whether such an argument has been made, the entire prosecution history is relevant. *Id.* Here, Aerotel expressly argued during the first reexamination that the special exchange is accessible to any available telephone and that it has a telephone number. (*See* Reply to Office Action in Reexamination, at 6 (Mar. 20, 2002) (“March 2002 Reply”) (“In accordance with the disclosure of the Kamil patent, when the prepaid customer desires to make a call using a special code . . . the prepaid customer (i.e., the calling party) first dials a telephone number to access or reach the special exchange.”); *id.* at 7 (“The point is that the special exchange (or any one of a plurality of special exchanges) could be reached from any available telephone (non-location-specific) by dialing its number.”); *id.* at 12 (“Mearns ’377 does not disclose or suggest a special exchange as described and defined by Patent Owner’s specification . . . . [W]hile Patent Owner’s system can be used from any available telephone, the Mearns ’377 system cannot.”).) As the quoted text indicates, these arguments narrowed the scope of the ’275 to overcome prior art, particularly Mearns. The Court therefore agrees with Telco that the special exchange contemplated by claims 1 and 23 must be accessible from any available telephone and must have a telephone number.

This conclusion, however, is qualified in two respects. First, the limitations in Aerotel's arguments refer only to the technological *capabilities* of the special exchange, not to the capability of a special exchange as installed in the real world. Thus, if a particular telephone cannot connect to a special exchange for reasons unrelated to the technological capabilities of the exchange, the exchange is still capable of practicing the '275 patent. For example, if a particular phone (say, a pay phone in Uzbekistan) cannot connect to a special exchange (say, one in Wasilla) with all the features described in the '275 patent, the exchange does not thereby cease practicing the invention. What matters is that the exchange is technologically capable of receiving calls from any available telephone and connecting the calling party to another party subject to verification.

Second, the Court finds no support for Telco's proposal that the special exchange's telephone number be "conventional." No argument to this effect appears in Aerotel's reexamination. And given that the phone-number limitation is entirely a product of estoppel, the Court is unwilling to infer a requirement that the special exchange have a conventional phone number from the mere fact that it is dialed. One can easily imagine dialing a special exchange without dialing a conventional phone number, as would happen if a network operator assigned a special dialing code—"211," for example—to the exchange.

Aerotel contends that requiring the special exchange to be accessible from any available telephone violates the doctrine of claim differentiation, since claim 23, unlike claims 1 and 9, does not expressly require that calls be made from any available telephone. *See generally Phillips*, 415 F.3d at 1314; *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1538 (Fed.Cir.1991). The Court finds this argument unconvincing. Aerotel's

narrowing arguments applied to both claims 1 and 23. (*See, e.g.*, March 2002 Reply, at 12, 11.) And in any case, Aerotel never explains why “special exchange” should have a different meaning depending on the claim it falls under. Even when the special exchange is reached through dedicated public phones, it is still located in the middle of the public telephone network, and reachable by any available telephone assuming the appropriate network connections. (*See, e.g.*, col.5 ll.64-66 (“The dedicated phones are connected through switches such as switch **102**, and a regular exchange, to the special exchange.”))

The special exchange has its own telephone number, which need not be a conventional telephone number. It is capable of being accessed from any available telephone to make a prepaid call.<sup>7</sup>

*c. Components*

Next, the parties dispute what features the special exchange must have. Aerotel contends that the special exchange “includes a telephone call router (which may be a switch), *computers* and memory having software for verifying that the stored credit is sufficient to connect and continue a call.” (Joint Claim Chart, at 4 (emphasis added).) Telco agrees that the special exchange includes a telephone call router that may be a switch, but otherwise contends that the exchange includes “*at least one* computer, and memory.” (*Id.*) Thus, there are two issues in dispute: the special exchange’s capabilities, and whether a hardware configuration that includes a single computer is a “special exchange.”

---

<sup>7</sup> The Washington Court also comes to the conclusion that the special exchange is reachable from any available telephone. Washington Court, 8-14 (“The court therefore construes “special exchange,” as used in Claim 23, to consist of a telephone router, computer, and memory that is behind the exchange and can be reached from any available telephone.”).

The claims expressly indicate the functions the special exchange must be able to perform. Specifically, the exchange must be capable of “storing [a] prepayment amount in a memory . . . for use in verifying calling party calls;” (step (a)); receiving incoming calls (step (c)); accepting and processing user input, particularly a special code and the number of the called party (steps (d) and (e)); “verifying” that information, *see infra* § II.C.4; and performing functions related to monitoring calls (steps (h) and (i)). From the specification, it is clear that these functions are performed by a computer and not, for example, by dedicated hardware. (*See, e.g.*, col.3 ll.30-31 (“The computer at the special exchange checks the code and registers the desired called number.”); col.4 ll.9-11 (“When the credit equals the used time rate the call is automatically ended by the computer . . . .”); col.4 ll.30-31 (“[T]he call can be disconnected by the computer if he runs out of time or by the user.”).) The Court therefore agrees with Aerotel that the special exchange contemplated by the ’275 patent must contain memory and software for verifying that the stored credit is sufficient to connect and continue a call.

With respect to how many computers the special exchange contains, the specification makes clear that one is enough. (*See, e.g.*, col.3 ll.26-31 (“When the calling party hears the special dial done[,] indicating that *the computer* at the exchange is ready for him[,] he dials the identifying code and the called number he wants as indicated at block **17**. *The computer* at the special exchange check the code and registers the desired call number.” (emphasis added)); col.4 ll.30-31 (“[T]he call can be disconnected by the computer if he runs out of time or by the user.”).) Aerotel offers no argument otherwise, thus the Court rejects its proposed construction.

The special exchange includes (1) a telephone call router (which may be a switch), and (2) at least one computer with memory and software capable of verifying that the stored credit is sufficient to connect and continue a call.

*d. Dialing*

Lastly, the parties dispute just what it means to dial the special exchange. Aerotel proposes that “[d]ialing said special exchange’ means to send a signal representing a number to cause communication with the special exchange.” (Joint Claim Chart, at 5.) Telco, on the other hand, interprets “dialing said special exchange” to mean “[t]he user of the prepaid telephone service dials the telephone number of the special exchange when the user desires a telephone connection.” (*Id.*)

It is not clear that the parties genuinely dispute what it means to dial the special exchange. Nevertheless, a review of the specification shows that the ’275 patent broadly uses the term “dialing” to mean making a telephone call or connection. Certainly, this includes dialing in the sense familiar to most users of telephones—i.e., physically inputting numbers on a phone in order to cause a connection with a remote phone. (*See, e.g.*, col.3 ll.20-22 (“He uses the nearest available telephone, removes the handset and dials a special central office . . . .”).) But it also includes automated dialing by equipment connected to the telephone network. (*See, e.g.*, col.5 ll.46-50 (“The register stores the called number from the calling party and directs the redialer **89** to dial the number after verification . . . .”).) The Court thus respectfully disagrees with the Washington Court, which found that the “act of ‘dialing’ requires that the keypad of a touchtone phone or the dial of a rotary phone be utilized....” Washington Court, 15. Although the origin of the term may be the rotary phones and clunky keypads of a bygone era, by the time the patent was filed “dialing” had come to a broader meaning than that, and it is used in its general

sense in the claims. The Court therefore interprets “dialing” the special exchange to mean making a telephone call or connection with the exchange.

Telco’s principal argument to the contrary is that the specification nowhere describes dialing the special exchange in any sense other than physically inputting numbers on a phone. True—but it is blackletter law that the scope of a claim is not limited to the particular embodiment or embodiments described in the specification. *See Resonate Inc.*, 338 F.3d at 1364-65. Fairly interpreted, the Court cannot conclude that, by using “dialing” in the sense familiar to most users, Aerotel intended to limit the scope of the claims to dialing by physically inputting a phone number.

“Dialing said special exchange” means making a telephone call or connection to the special exchange.

*e. Summary*

The special exchange described by the ’275 patent (1) is physically located behind a local telephone exchange; (2) has its own telephone number (which may or may not be “conventional”); (3) is capable of being accessed from any available telephone to make a prepaid call; and (4) includes (a) a telephone call router (which may be a switch), and (b) one computer (or more) with memory and software capable of verifying that the stored credit is sufficient to connect and continue a call. “Dialing the special exchange” means making a telephone call or connection to it.

**4. “[V]erifying the special code and comparing the prepayment amount less any deduction for previous calls in the memory and the minimum cost of the inputted call” and “connecting the called party to the calling party in response to the verification”**

Steps (f) and (g) describe the process of “verifying the special code and comparing the prepayment amount less any deduction for previous calls in the memory

and the minimum cost of the inputted call” (step (f)) and “connecting called party to the calling party in response to the verification” (step (g)).

The parties dispute whether the “verification” referred to in step (g) checks for (1) only a facially valid code (Telco’s interpretation) or (2) a facially valid code and an account with a balance sufficient to cover the minimum cost of the call (Aerotel’s interpretation). (*See* Joint Claim Chart, at 6.) In the Court’s view, step (g) is most naturally read as referring back to both functions described in step (f). In ordinary usage, checking an account’s balance is a form of verification; and it would have been awkward, illogical, and unnecessary to write this step as “connecting called party to the calling party in response to the verification *and comparison*.” Any doubt as to what step (g) means is removed by the express language of the specification: “If the code number is a genuine code *with credit*...he is connected to the regular telephone system.” (Col.3 ll.32-35.) Therefore, the Court agrees with Aerotel that “[a] call will not be connected unless the calling party has previously inputted a valid special code and the amount remaining of the prepayment amount is sufficient to pay the minimum cost of the inputted call.” (Joint Claim Chart, at 6.)

**5. “[M]onitoring the prepayment amount less deductions for the running cost of the call”**

Finally, the parties raise two issues concerning claim 1’s “monitoring” step (h): (1) what “prepayment amount less deductions for the running cost of the call” means, and (2) what *unit* is monitored—time, money, or something else.

*a. Prepayment amount*

Step (h) of claim 1 calls for “monitoring *the prepayment amount less deductions for the running cost of the call*.” As noted above, *see supra* II.C.2, steps (a) and (b) use

“prepayment amount” to refer to the exact amount of money a user deposits to obtain a special code. Step (f) calls for the system to compare “the prepayment amount less any deduction for previous calls” with “the minimum cost of the inputted call.” Thus, there is something strange about step (h): it calls for deducting “the running cost of the call” from the prepayment amount in the monitoring operation, but not the cost of *previous* calls.

The parties draw different conclusions from this omission. According to Aerotel, the claim as a whole reflects an intent to monitor an account’s balance; “prepayment amount” in step (h) is shorthand for “the prepayment amount less any deduction for previous calls’ referred to in step (f).” (Joint Claim Chart, at 7.) Telco, however, contends that the “prepayment amount” of step (h) has the same meaning in steps (a), (b), and (f): “[a]n amount of money deposited by a user with the prepaid telephone service to receive a special code.” (*Id.* at 6, 2.)

The Court has little doubt that at some point, the drafters of the ’275 patent intended the claim to include a limitation similar to step (h) that referred to an account’s balance. In the original version of the patent, step (a) referred simply to a “prepayment,” while the rest of the claim referred to the “credit” associated with a special code. (*See* Nov. 1985 Amdt., at 1-2.) The claim thus distinguished between two values: the amount of money a user deposited to establish an account (the “prepayment”), and the amount of credit available to an account (“credit”).

Yet by amending the claim to use the same term (“prepayment amount”) to refer to both the “prepayment” and the “credit” linked to an account, Aerotel precluded a reading of claim 1 that draws this distinction. Interpreted in light of the specification, “prepayment amount” refers to the amount of money deposited by a user to establish a



prepaid account. *See supra* § II.C.2. Consistent with this understanding, step (b) refers to storing that amount in memory, and step (f) refers to comparing that amount “less any deduction for previous calls in the memory” with the “minimum cost of the inputted call.” Without resorting to principles of construction derived from *Through the Looking Glass*, the “prepayment amount” of step (h) cannot suddenly and without explanation mean the total credit then available in an account. *See Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350 (Fed. Cir. 1999) (rejecting contention that same term can have two different meanings within a claim); *Banyan Licensing, L.C. v. Orthosupport Intern., Inc.*, 34 Fed. Appx. 696, 698 (Fed. Cir. 2002) (recognizing that in *Process Control* “[t]he court held that the phrase used in the same way in the same claim had to be interpreted in the same way”) *Phonometrics, Inc. v. Northern Telecom Inc.*, 133 F.3d 1459, 1465 (Fed.Cir.1998) (“A word or phrase used consistently throughout a claim should be interpreted consistently.”). *See also Helmsderfer v. Bobrick Washroom Equipment, Inc.*, 527 F.3d 1379, 1383 (Fed. Cir. 2008) (“Courts cannot rewrite claim language.”); *SRAM Corp. v. AD-II Engineering, Inc.*, 465 F.3d 1351, 1359 (Fed. Cir. 2006) (“[W]e are powerless to rewrite the claims and must construe the language of the claim at issue based on the words used.”); *Pfizer, Inc. v. Ranbaxy Labs. Ltd.*, 457 F.3d 1284, 1292 (Fed. Cir. 2006)) (“[C]laim 6 could have been properly drafted either as dependent from claim 1 or as an independent claim—i.e., ‘the hemicalcium salt of atorvastatin acid.’ But, we ‘should not rewrite claims to preserve validity.’” (quoting *Nazomi Commc'ns, Inc. v. Arm Holdings, PLC*, 403 F.3d 1364, 1368 (Fed. Cir. 2005))).

Thus, although it is possible to discern a contrary interpretation from the patent’s history, “prepayment amount less deductions for the running cost of the call” means what

it says: the exact amount of money deposited to obtain a special code, *supra* § II.C.2, less the running cost of the current call.

*b. What is monitored?*

The parties next dispute what units the comparator shown at block 29 of figure 1 uses in determining whether to terminate a call. According to Aerotel, “[m]onitoring the running cost of the call’ includes “monitoring by time which is converted to money or monitoring by time which is a function of money” (Joint Claim Chart, at 7.) According to Telco, “[t]he prepaid telephone system continuously keeps track of the difference between the amount of money paid by a user of the prepaid system and the cost of a call incurred as the call proceeds[.]” (*Id.*)

Both the claim and the specification expressly call for comparison of money. Claim 1 recites “monitoring the prepayment *amount* less deductions for the running *cost* of the call” (step (h) (emphasis added))—two references to monitoring money. Then, the claim calls for “disconnecting said call when the prepayment *amount* has been spent” (*id.* (emphasis added))—a third reference to money.

Furthermore, the corresponding sections of the specification also call for comparison of money. The description of figure 1 provides for the computer to end the call “[w]hen the credit equals the used time rate.” (Col.4.11.3-11.) “Credit” expresses a monetary unit, and in turn so must “used time rate” if the two are ever to equal one another. Similarly, the description of figure 2 provides for something called the “time change rate of the call” to be “subtracted from the credit amount.” (Col.5.11.13-15.) Since “credit amount” is obviously monetary, so too must be the “time change rate of the call” if one is to be subtracted from the other. Neither equality nor simple subtraction can be achieved between figures with different units. (Imagine if the system were

programmed to subtract, for example, “\$20” from “4 minutes,” or to cancel a call when those were equal.) Accordingly in view of the plain language of the claim and the specification’s repeated references to a comparison of monetary variables, the Court holds that claim 1 requires a comparison of money.<sup>8</sup>

Aerotel points to three sections of the specification that, it claims, support its view that “monitoring the running cost of the call” includes monitoring by time which is converted to money or monitoring by time which is a function of money. (*See* Pl.’s Opening Br. 22-23.) First, Aerotel notes that in one embodiment, “an artificial or prerecorded voice announcement stat[es] the amount of credit available and that the amount of credit is equivalent to so many minutes of talking time on the call being connected.” (Col. 3 ll.44-48.) This functionality, however, involves the prepaid exchange’s user interface; it has nothing to do with how the system monitors calls. Next, Aerotel points to the description of figure 1 quoted above, and contends that because information (time, in Aerotel’s view) is sent from a peg counter to a comparator, the comparator necessarily has the ability to compare units of time. But as explained above, a comparator can compare either money or time using relatively simple arithmetic; what matters for purposes of construing claim 1 is that the language of the claims expressly calls for a comparison of units of money. Finally, Aerotel points to an embodiment where “the time rate of the call is used to compute the cost of the call which is subtracted from, or compared to, the credit amount as the call progresses.” (Pl.’s Opening Br. 23.)

---

<sup>8</sup> Notably, this interpretation is consistent with how Aerotel presented the invention during reexamination. Aerotel’s seventh reexamination slide shows a conventional stovetop-type timer, which is set to “\$5” and has counted down to “\$3.” (*See* Telco Demonstratives, at 6, Nov. 12, 2008) (available in Clerk of Court’s case file).

This too does nothing to help Aerotel: the *cost* of the call is compared to the *credit* available.

The unit monitored in steps (h) and (i) is monetary.

**D. Claim 23**

**1. Terms Interpreted Consistently with Claim 1**

The Court interprets “special exchange” and “dialing said special exchange” as having the same meaning under claims 1, 9, and 23. Nothing in the language of the claims or specification suggests these terms have a different meaning depending on the claim they fall under. Thus, the presumption that terms are “used consistently throughout the patent,” *Phillips*, 415 F.3d at 1314, is sound as to these terms. Several terms, however, do not appear in claim 1 or have a meaning in claim 23 that differs from their meaning in claim 1. The Court now turns to these terms.

**2. “[I]ssuing a valid special code to a calling party when a prepayment amount is deposited . . . ”**

Step (a) of claim 23 calls for “issuing a valid special code to a calling party when a prepayment amount is deposited to the credit of said calling party[.]” The parties disagree over whether the claim implies anything about *who* deposits a prepayment, and the characteristics of the account to which the deposit is credited. According to Aerotel, the entire phrase should be given its plain and ordinary meaning. (Joint Claim Chart, at 16.) Telco, however, contends that “issuing when deposited” means that “[a] *user* of the prepaid telephone service supplies the prepayment amount *to the prepaid telephone service provider* to establish an account in that amount.” (*Id.* (emphasis added).)

As the Court reads it, claim 23 is silent concerning who deposits a prepayment and to whom the deposit is directly made. Step (a), like most of the claim, is written in

the passive voice and recites that a prepayment “is deposited” “to the credit of said calling party.” That money is deposited to someone’s credit does not speak to who deposits the money. For reasons described above, this understanding is consistent with the invention disclosed in the specification. *See supra* § II.C.2. In contrast to claim 1, however, claim 23 appears to contemplate that accounts at the special exchange are associated with a particular user. In particular, step (a) calls for “issuing a valid special code *to a calling party* when a prepayment amount is deposited *to the credit of said calling party*.” Thus, while claim 1 contemplates generic accounts that may or may not be linked to a particular user, *see supra* § II.C.2, claim 23 requires that a particular account be linked to at least one user.

**3. “[D]educting from the initial prepayment amount the running cost of the call”**

Step (h) calls for “deducting from the initial prepayment amount the running cost of the call.” The parties differ over when this happens. Telco contends that “[t]he running cost is deducted from the prepayment amount at the end of the call” (Joint Claim Chart, at 22), while Aerotel contends the claim does not speak to when the deduction occurs (*see id.*). The Court agrees with Telco.

The most natural reading of steps (f), (g), and (h) is that the cost of a call is deducted from an account’s available balance after a call is disconnected. As discussed in the following section, claim 23 uses “initial prepayment amount” and “current initial prepayment amount” to refer to the account’s balance. Consistent with this usage: step (f) calls for “monitoring the running cost of the call in accordance with its duration;” step (g) calls for disconnecting the call “when the running cost of the call exceeds the current initial prepayment amount” (account balance); and step (h) calls for “deducting from the

initial prepayment amount the running cost of the call.” The comparison contemplated by step (g) requires that the “running cost” increase over time until the end of the call, whether that is effectuated by the caller hanging up or by the “running cost” eventually increasing to match the account balance. If the latter described comparison causes the end of the call, the immediately following deduction envisioned by step (h) brings the account balance to zero. If the caller simply hangs up then the running cost is deducted to create the new account balance. In both of those scenarios the deduction occurs at the end of the call. This is consistent with the Court’s conclusion, *supra*, that steps (a) through (h) are to be performed sequentially, which requires that step (h) happens after step (g).

Aerotel’s only argument for allowing the amount to be deducted during the call is that the patent’s drawings and abstract refer to deducting credit “as the call progresses.” (’275 patent, at [57]; *see* Pl.’s Opening Br. 26). But of course, “[t]he words of the claims define the scope of the patented invention.” *Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1373 (Fed. Cir. 2008); *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Where those words clearly describe the functions claimed, the Court will not expand the claim by reference to the specification and drawings.

The Court finds, as the Washington Court did, Washington Court at 27, that “deducting from the initial prepayment amount the running cost of the call” means that the cost of the call is deducted from the initial account balance after the end of the call.

#### **4. “Prepayment amount” and variants**

As noted earlier, Aerotel attempts to use “prepayment amount” (in claim 1 steps (a) and (b)) to refer to the amount of money initially deposited by a user, while also contending that the use of the term in claim 1, step (h) refers to the balance available in a

user's account. The Court ruled above, however, that the term could not, consistent with ordinary usage, be used to refer to both values. Accordingly, in claim 1, "prepayment amount" refers only to the amount initially deposited by a user to establish a prepaid calling account.

Claim 23 avoids this problem by introducing new terminology to distinguish between the amount of money deposited by a user and an account's balance. Steps (a) and (b) again refer to the deposit of a "prepayment amount" to establish an account with the prepaid calling system. But step (e) recites connecting a call only if "the *current initial* prepayment amount" exceeds the minimum cost of a call to the inputted number. (emphasis added). Step (g) employs the same term to describe terminating a call when "the running cost of the call exceeds the *current initial* prepayment amount." (emphasis added) Then, step (h) calls for the cost of the call to be deducted from the "*initial* prepayment amount." (emphasis added).

The Court holds that claim 23 uses "prepayment amount," "initial prepayment amount," and "current initial prepayment amount" in two senses. Unmodified, the term refers, as its use in claim 1 does, to the amount originally deposited to establish a prepaid account. Modified by the word "initial" or the words "current initial" the term refers to an account's current balance. As discussed with respect to claim 1, these are the two values that are necessary to describe acquisition and use of a calling-card in the patented system. This interpretation best gives effect to the plain meaning of each term in the claim. *See Cat Tech LLC v. TubeMaster, Inc.*, 528 F.3d 871, 885 (Fed. Cir. 2008); *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006). It is consistent with the specification's understanding of how the system operates. (*See* col.4 ll.3-11; col.5 ll.13-

26.) And although the Court does not distinguish between the terms “initial” and “current initial”, differently worded terms within a claim may nonetheless have the same meaning. *See Fargo Electronics, Inc. v. Iris Ltd., Inc.*, No. 04-1017, 2005 WL 3241851 (D.Minn. Nov. 30, 2005) (construing “unmagnetized magnetic material” and “magnetic material pins” to have the same meaning because “[a]lthough a patentee's use of different terms normally indicates that it intended those terms to carry different meanings, a reading of the patent and prosecution history does not reveal what that difference might be in this case...”). *See also St. Clair Intellectual Property Consultants, Inc. v. Canon, Inc.*, No. Civ.A.03-241, 2004 WL 1941340 at \*4 (D.Del. Aug. 31, 2004); *Freescall Semiconductor, Inc. v. Promos Technologies, Inc.*, 561 F. Supp. 2d 732, 758 (E.D.Tex. 2008).

This interpretation does not give separate effect to the use of the modifier “current initial” as opposed to “initial” because nothing in the claim, the specification, or the prosecution history provides for an amount other than (1) the amount paid up front, and (2) the current account balance, and because both terms are used in the claim in a way that forecloses any other meaning. The Court respectfully disagrees with the Washington Court, which in attempting to “give each claim term effect” determined that: (1) “prepayment amount” refers to the original deposit; and (2) “initial prepayment amount” refers to the amount in the account at the beginning of the call; but (3) “current initial prepayment amount” separately means “the monetary value *as it is reduced during the call*” or in other words “the running balance....” Washington Court at 24 (emphasis added). Although the Washington Court gave meaning to the modifier word “current,” in so doing it stripped the entire step in which that word appears, step (g), of its meaning.



Step (g) envisions comparing the “running cost of the call” to the “current initial prepayment amount,” and disconnecting the call when the running cost equals the “current initial prepayment amount” (or a party hangs up). As the Washington Court interprets “current initial prepayment amount” however, it is the “running balance.” *Id.* at 25. But comparing the “running balance” to the “running cost” is nonsensical because the running balance has, by definition, already had the running cost subtracted from it.<sup>9</sup> Rather, if the comparison in step (g) is to have the intended effect, the “current initial repayment amount” must be equal to the account balance at the start of the call.

Moreover, the Washington Court found, as did this Court, that the deduction explained in step (h) means “reducing the initial prepayment amount by the running cost of the call *at the end of the call.*” *Id.* at 27 (emphasis added). This position is inconsistent with a finding that there is a “running” balance during the call (the “current initial prepayment amount” as that court has construed it). If the system is storing an initial account balance and a running cost, and it is only at the end of the call deducting that cost from the prior balance, then the system is never computing a “running account balance.” That process would be superfluous. This Court concludes that the meaning of all of the terms in claim 23 is best vindicated by treating both “current initial prepayment amount” and “initial prepayment amount” as references to the account balance.

---

<sup>9</sup> For example, if a caller had \$4 to begin a call that costs \$1 every minute, the caller would expect to speak for 4 minutes, and the system envisioned by the patent would automatically terminate that call at the conclusion of the fourth minute. If the comparison is to the running account balance however, step (g) would terminate the call after only 2 minutes. The “running balance” after 2 minutes would be \$2 (the \$4 original balance minus 2 minutes at \$1 per minute). The “running cost” after 2 minutes would also be \$2 (2 minutes of talk times \$1 per minute). Step (g) terminates the call “when the running cost of the call exceeds the current initial prepayment amount [which is the running account balance according to the Washington Court’s construction]” or in this example after two minutes. This is clearly not what the patent envisions.

Telco makes two arguments in support of its alternative view that the “prepayment amount” of claim 23, even with the modifiers, means the same thing as the “prepayment amount” of claim 1. First, Telco maintains that “[o]nly the term ‘prepayment amount’ is used in the specification. (Def.’s Opening Br. 15.) This misrepresents the specification, which uses a smorgasbord of words to refer to prepayments and the available credit in a given account. (*See, e.g.*, col.1 l.8 (“a prepayment is in force”); col.2. ll.48-49 (“Credit of course can be established by the deposit of money . . . .”); col.2. ll.1-2 (“said calling party has credit on a prepayment”); col. 3 ll. 3-5 (“The customer . . . acquires a special code, a credit amount and the telephone number of the special central offices by either a cash or credit card payment.”); col.5 ll.15-17 (“The call can be terminated . . . either because no more credit [sic] or by the user.”).) In connection with this argument, Telco also contends that its reading of “prepayment amount” is necessary to preserve the patent’s validity; but again, validity is not at issue at this stage of the proceedings.

Second, Telco notes that Aerotel used the terms “current initial prepayment amount,” “current initial amount,” and “initial prepayment amount” interchangeably during prosecution. Telco claims, therefore, that these terms “mean the same thing, i.e. ‘prepayment amount,’ as defined [in claim 1].” (Telco’s Opening Br. 16, n.19 (citing Nov. 1985 Amdt. 6.)) Aside from the fact that Telco’s conclusion does not follow from its premises, in the cited portion of the reexamination history Aerotel used “current initial prepayment amount” and variants to refer to an account’s balance, *not* the amount of money originally deposited. (*See* Nov. 1985 Amdt. 6 (“[T]he calling party is connected to the called party only if the current initial prepayment amount stored in the memory

exceeds the minimum cost of a call . . . .”); *id.* (“In the event that the current initial amount in the memory exceeds the minimum cost of the call, the connection is made.”); *id.* (“[T]he system deducts from the initial prepayment amount the running cost of the call that the prepayment amount is initialized for the next attempt by a calling party to utilize the valid special code.”) The Court therefore rejects Telco’s contention that “prepayment amount,” with the modifiers introduced in claim 23, means the same thing as “prepayment amount” under claim 1. Rather, the prosecution history supports the Court’s construction.

As used in claim 23, “prepayment amount” means the exact amount of money deposited to obtain a special code. “Initial prepayment amount” and “current initial prepayment amount” refer to the account balance.

## **E. Claim 9**

At this juncture, the parties have only three disagreements regarding claim 9 that have not been answered by the Court’s constructions with respect to claims 1 and 23.<sup>10</sup>

### **1. Means for coupling**

---

<sup>10</sup> Claim 9 claims:

A telephone system for facilitating telephone calls including toll calls from any available telephone station for prepaid customers, said system comprising:

- (a) means for coupling a calling party station to a special exchange;
- (b) memory means in said special exchange for storing special customer codes and credit information individual to each prepaid customer;
- (c) means for verifying said calling party responsive to a code transmitted from the calling party’s station to the special exchange when one of the codes matches the code in the memory means and the calling party has unused credit and;
- (d) means for completing a call from said calling party station to a called station responsive to said verification, said means for verifying including means for monitoring the credit of the calling party during a completed call.

The parties disagree as to the structure and function of the “means for coupling a calling party station to a special exchange.” Aerotel asserts that the function is “signals can be sent from the calling party station to the special exchange,” and that the corresponding structure is “the regular telephone system.” (Joint Claim Chart, at 10.) Telco asserts that the function is “connecting a telephone used by a user to a special exchange,” and that the corresponding structure is not disclosed by the specification. (Joint Claim Chart, at 11.)

The Court mostly agrees with Telco. Given the fact that the parties are in agreement that the “calling party station” of claim 9 means “any available telephone,” (*See* Def.’s Rep. Br. 29, n. 33), it is clear that a means for coupling the calling party station to a special exchange is simply a means of connecting a telephone to a special exchange. The Court agrees with Telco that “connecting” is an adequate synonym for “coupling” in this context. Telco’s additional limitation, that the function is “connecting a telephone *used by a user* to a special exchange” is superfluous—obviously the telephone is used by a user—but unsupported—nothing in the claim supports the inclusion of that limitation.

As to the corresponding structure that performs that function, the patent is silent. Yet when expressing a claim limitation in means plus function format, “[t]he applicant must describe in the patent specification some structure which performs the specified function.” *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed. Cir. 1993). Aerotel contends that the “specification states that the structure corresponding to the ‘means for coupling’ is the regular telephone system.” (Pl.’s Rep. Br. 30.) But, it does not. Aerotel’s first citation in support of this assertion is col.3.11.23-24, which

states: “[t]he telephone in this example is a private station....When it is connected to the special central office (traveler phone services office) or exchange....” That excerpt does not state which structure provides the means for coupling. Aerotel’s second citation is col.5.ll.31-32, which states, “The calling phone is indicated at 81. The telephone 81 is connected to a regular telephone system indicated at 82.” That excerpt does not state which structure provides the means for coupling. Nor does the representation in figure 3, which includes block 81, demonstrate an apparatus for the function of coupling the special exchange and calling party station.

The function of the means for coupling is “connecting a telephone to a special exchange.” The patent does not recite a structure for performing that function.

## **2. Means for completing a call**

The parties disagree as to the construction of part (d) of claim 9, which adds the limitation that the telephone system include “means for completing a call from said calling party station to a called station responsive to said verification.”

Aerotel contends that the function “completing a call” means “taking action that will result in the called party station being connected to the called station.” (Joint Claim Chart, at 13.) Telco contends that the function is “connecting the telephone used by the prepaid user to the telephone used by the called party.” With respect to the action taken, the parties use the same words to say the same thing: “taking action that will result in ... being connected” means precisely the same thing as “connecting.” With respect to whether it is a “called station” or a “telephone used by the called party,” since the parties agree that “telephone station” and “telephone” have the same meaning, these terms mean

essentially the same thing: it is the receiving telephone. Finally, with respect to whether reference to the “prepaid user” should be included in the construction, just as with that inclusion in the means for coupling, above, the Court finds that extraneous addition unsupported. The function “completing a call” means “connecting the calling party’s telephone to a called telephone.”

The structure that performs that function is set forth in the patent’s specification:

It is within the scope of the invention as previously described for the calling party to dial while the verification is being accomplished, in which case when the calling party hears normal dial tone, [sic] *a register in the exchange can then input the dialed information to cause the exchange to complete the call between the calling party and the called party.* Col.3.ll.64-Col.4.ll.2 (emphasis added)

The special exchange is the structure that performs the function of completing a call.

Telco “agrees that the special exchange enables the completion of the call,” (Telco Rep. 30), but argues that since “the call cannot be completed without the regular telephone system,” the corresponding structure for completing a call should also include the regular telephone system. But “regular telephone system” is not as simple a term as Telco makes it out to be, special exchanges could be made to interact with a variety of telephone systems, and in any of them “completing a call” could simply mean the function performed by the special exchange. Moreover, the patent specification states that it is the special exchange that performs that function, and Telco has not made any arguments nor cited to any cases that support deviating in the construction of a means-plus-function claim from a structure explicitly disclosed in the specification.

### 3. Means for monitoring.

Claim 9 also describes “means for verifying including means for monitoring the credit of the calling party during a completed call.” The parties disagree as to the function and structure of the “means for monitoring.”

While Telco contends that the function of “monitoring the credit” is “keeping track of the difference between the prepayment amount less deductions for the running cost of the call,” (Joint Claim Chart, at 13), Aerotel contends that the function is *either* “monitoring by time which is converted to money” *or* “monitoring by time which is a function of money.” (*Id.*) At the outset, the Court notes that, just as it found earlier with respect to claim 1, the “credit” that is ultimately monitored is unambiguously monetary. Of course that credit is the result of a computation involving time and the cost-per-time of the call, but that computation would occur within one of the corresponding structures and the ultimate purpose of the monitoring is the eventual comparison with credit. Accordingly the Court rejects Aerotel’s construction. Telco’s construction replaces the word “credit” with the technical term “prepayment amount,” which is used in several other instances in the patent. The Court is unwilling to conclude that the inventor intended to use “prepayment amount” here but instead used “credit” and is hesitant to introduce into its construction both that term and in turn the particular construction that the Court has given that term. Rather, the Court finds that the “credit” is simply the amount of money in the calling party’s account. Thus the function of “monitoring the credit” is comparing the amount of money in the calling party’s account with the cost of the call.

The specification describes a detailed structure that performs this function.

[t]he normal time and distance computing circuit is shown as a peg counter, is put into service to provide information for timing the call against the available credit. The information from the peg counter is sent to a *comparator 29 to continuously determine whether the calling party's credit is sufficient to pay for the call.*  
Col.4 ll.3-9 (emphasis added)

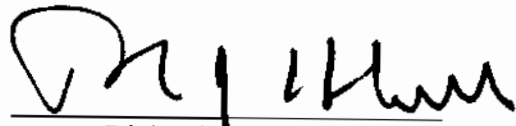
The corresponding structure for the “means for monitoring” is a comparator, which makes use of information from a time and distance computing circuit.

### III. CONCLUSION

The Court construes the disputed claim terms in the '275 patent as set forth in this Opinion.

SO ORDERED.

Dated: New York, New York  
May 12 2010

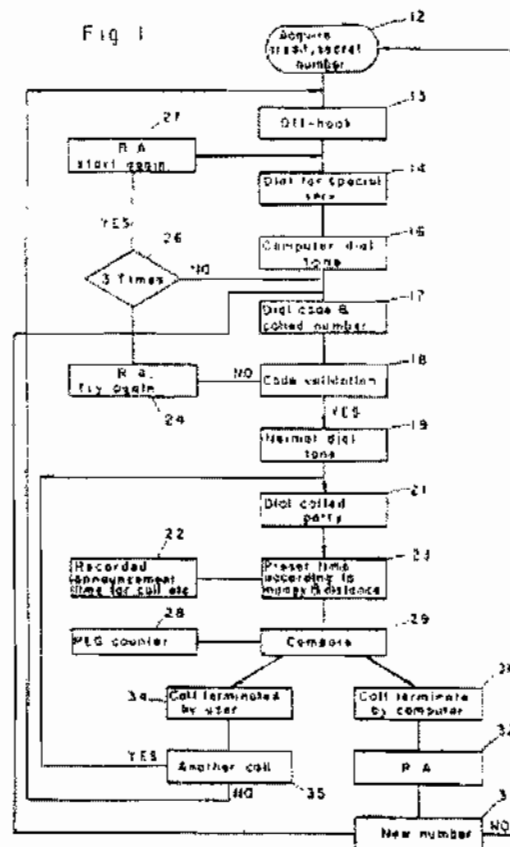
A handwritten signature in black ink, appearing to read 'Richard J. Holwell', written over a horizontal line.

Richard J. Holwell  
United States District Judge



# APPENDIX

## Figures from the '275 Patent



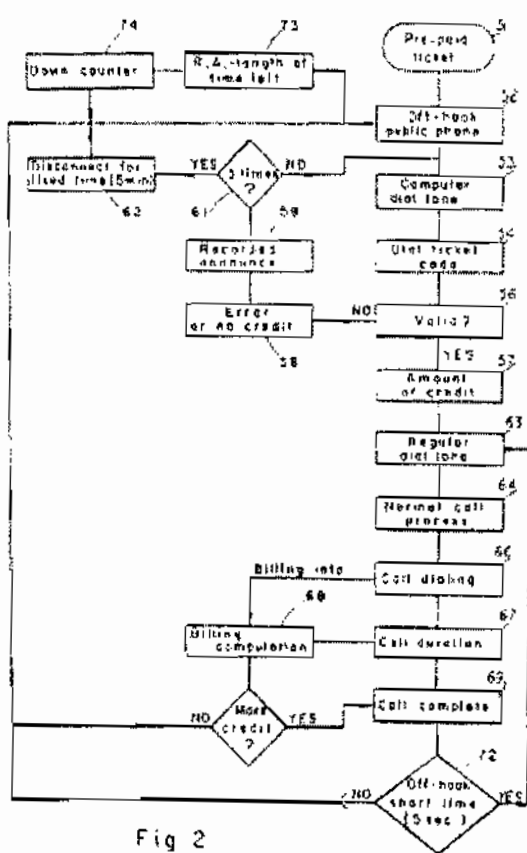


Fig 2

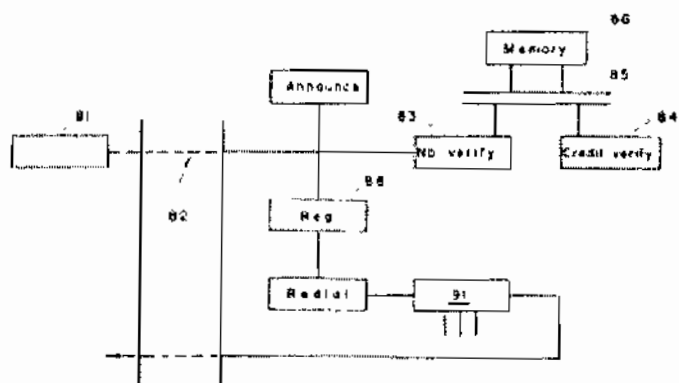


Fig 3

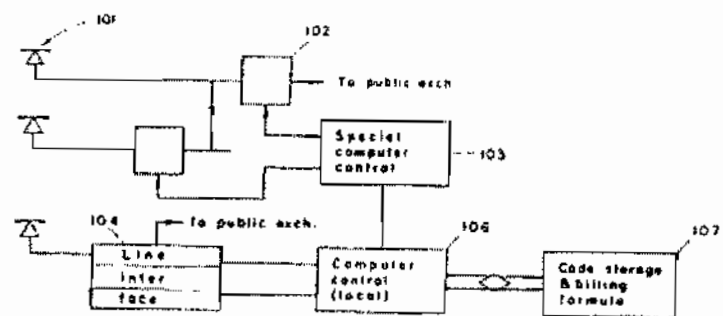


Fig 4